

What is claimed is:

✓ 1. A dental instrument having a drive tool and a transmission device with at least one magnetic and/or magnetizable clutch element, each clutch element having an air gap and a flux guide coil, the instrument comprising:

h13
a means for influencing the transmission torque of the magnetic and/or magnetizable clutch element.

2. The dental instrument according to claim 1, further comprising:

a means for modifying the air gap of the clutch element.

3. The dental instrument according to claim 1, further comprising:

a means for modifying the flux guide coil of the magnetic clutch element.

4. The dental instrument according to claim 3, wherein:

the means for modifying the flux guide coil is positioned in the zone of influence of one or more clutch elements.

5. The dental instrument according to claim 3, wherein:

the means for modifying the flux guide coil is an electromagnet.

6. The dental instrument according to claim 5, wherein:

the magnetic force of the electromagnet is controlled according to service parameters.

10003293-120601

10003293.120501

7. The dental instrument according to claim 5, wherein:
the flux guide coil is indirectly modified by stationary magnets.
8. The dental instrument according to claim 5, wherein:
the flux guide coil is directly modified by moving magnets, and
the moving magnets transfer the torque with respect to the magnetic force.
9. The dental instrument according to claim 4, further comprising:
a softly magnetized part,
the low retentive part is only effective in a subzone of the magnetic clutch element.
10. The dental instrument according to claim 4, wherein:
switching means are provided that cooperate with the magnetic clutch element and the low retentive part.
11. The dental instrument according to claim 1, wherein:
the magnetic clutch elements are chosen in such a manner, that after the declutching of the magnetic clutch elements a force is created, which is opposite to the original working direction, by means of which the tool can be moved into the opposite direction.

100032293.120601
T09021 562E0001

12. The dental instrument according to claim 1, further comprising:
a neck drive;
a drive motor with high rotation speed; and
a reduction gear for reducing the rotation speeds in a zone between 5 and 25 rotations/sec. (300 to 2100 rotations/minute).
13. The dental instrument according to claim 1, wherein:
the drive tool can be loaded with torsion up to a threshold value; and
the transmitting device is formed with the magnetic clutch element so that the threshold value of the drive tool is never reached.
14. The dental instrument according to claims 1, further comprising:
a tool for root canal treatment.
15. The dental instrument according to claim 1, wherein:
the magnetic clutch element is arranged so that rotations are transmitted on an input side and on an output side.
16. The dental instrument according to claim 1, wherein:
(The magnetic clutch element is arranged such that a part of the clutch performs a rotation, and the other part of the clutch performs a translation.
17. The dental instrument according to claim 1, wherein:
both magnetic clutch elements perform translations.

18. The dental instrument according claim 1, wherein:

a connection point is provided on a motor,

said connection point corresponds to the connection point of a tool
working with a high rotation speed.

10003293.120501